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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,598	09/14/2000	Satoshi Nakajima	109908-130328	8929

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EXAMINER

BASOM, BLAINE T

ART UNIT PAPER NUMBER

2173

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<p align="center">Office Action Summary</p>	Application No. 09/661,598	Applicant(s) NAKAJIMA, SATOSHI	
	Examiner Blaine Basom	Art Unit 2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,10-12,15,19-21,25-27,30,34-36,40-42 and 45-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,10-12,15,19-21,25-27,30,34-36,40-42 and 45-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Response to Arguments***

The Examiner acknowledges the Applicant's amendments to claims 1, 10, 11, 15, 25, 26, 30, 40, 41, 46, 50, and 54. Regarding the pending claims, the Applicant argues that Cook (U.S. Patent No. 6,178,432 to Cook et al.), cited in the previous Office Action, fails to teach a display state definition that includes a plurality of display cell definitions. The Applicant particularly argues that, if given the Examiner's previous assertion that a display object definition like described by Cook is considered a display state definition like claimed, then Cook could not teach a display state definition that has multiple display cells, as is now required. In response, the Examiner respectfully notes that the "display state definitions," and "display cell definitions" of the claimed invention are recited broadly enough such that Cook still reads on the claimed invention, even if one does not consider the display object definition of Cook to be a display state definition like claimed. For example, as is described more fully below, the "structures" described by Cook can also each be considered a display state definition. Such structures, which comprise multiple objects, can thus comprise multiple display cell (object) definitions like now claimed. Accordingly, the Applicant's arguments have been considered, but are moot in view of the following new grounds of rejection, which are required in response to the Applicant's amendments.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 6, 10, 11, 15, 20, 21, 25, 26, 30, 35, 36, 40, 41, and 45-54 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,178,432, which is attributed to Cook et al. (and hereafter referred to as “Cook”). In general, Cook discusses interactive web pages (see e.g. column 1, lines 5-9). Cooks notes that with conventional web pages design, it is not possible for the end user to change the appearance of a web page; instead the user is limited to selecting links which cause different web pages to be displayed (see e.g. column 1, lines 30-55). Cooks attempts to overcome this limitation via interactive web page “objects,” which provide dynamic web-based user interfaces without the need to continually download web pages (see e.g. column 2, line 51 – column 14). Such objects are considered “cells” like claimed, because they each define the constituting contents of a portion of the user interface.

Cook discloses that objects may be organized in a plurality of “structures,” such as “groups,” “stacks,” and “switches” (see e.g. column 5, line 59 – column 6, line 14). Such structures are each considered a “display state definition” like claimed, because they comprise information that defines the appearance of a portion of the interface, for a given display state of the interface. Cook further discloses that one or more “behaviors” may be associated with each object (see e.g. column 3, lines 27-38). A behavior defines a relationship between an event, an

action, and a target object: in response to the event (e.g. user input on the object), the particular action is performed on the target object, thus changing the state of the target object (see column 3, lines 27-38). For example, Cook discloses that in response to the user selection of an object, a second object may become visible in the user interface (see column 4, line 39-column 5, line 11). Thus in response to the user interacting with a visible object, the client computer determines if any behaviors are associated with that object, and if so, uses these behaviors to ascertain which objects change state as a result of the user interaction (for example, see column 10, line 35 – column 11, line 40). By doing so, the client computer determines a new display state for the user interface in response to user interaction, the new display state defined by the state of each of the objects and the structures containing the objects.

Thus regarding claims 1, 15, and 30, Cook teaches: receiving by the browser of a client device, from a remote server, a plurality of display state definitions (i.e. “structures”) defining a plurality of instantiations of a user interface of an application for a plurality of display states of the user interface (see e.g. column 6, lines 24-45; and column 10, lines 5-27), wherein (1) at least one of the plurality of instantiations of the user interface corresponds to a multidimensional display state, the at least one instantiation defined by two or more display state definitions (see e.g. the instantiation of FIG. 3A and its corresponding hierarchical structured object list in FIG. 3B: the instantiation of FIG. 3A is defined by more than one display state definition, i.e. by a “BACKGROUND GROUP” structure, a “ROBIN GROUP” structure, a “TOM GROUP” structure, a “JILL GROUP” structure, an “ANNOTATION STACK” structure, and a “GREETING SWITCH” structure, as is shown in FIG. 3B), and (2) at least at least one of the plurality of display state definitions includes a plurality of display cell definitions (i.e. “objects”)

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correspondingly defining a plurality of display cells of a corresponding one of the plurality of instantiations of the user interface (see e.g. column 2, line 61 – column 3, line 14; and column 5, line 59 – column 6, line 14); determining locally by the client device, a current display state of the user interface (i.e. determining, in response to user interaction, the display states of each of the objects; see e.g. column 10, line 35 – column 11, line 40); and, provisioning by the client device, a current instantiation of the user interface in accordance with one or more of the display state definitions associated with the determined current display state (see e.g. column 12, lines 7-30). Cook thus teaches a method like that of claim 1. As per claims 15 and 30, Cook discloses that this method may be implemented by a browser on the client computer (see e.g. column 6, lines 24-45), which as known in the art, is implemented via programming instructions. A client computer storing and executing the browser of Cook is thus considered an article of manufacture like described in claim 15, and a client device like that described in claim 30.

Concerning claims 45, 47, and 51, an object displayed within an instantiation of a user interface is considered a “display cell” of the instantiation, as is described above. As further described above, Cook discloses that objects may be organized within a display state definition (i.e. a “structure”). Accordingly, each display state definition (i.e. structure) comprises a display cell definition (i.e. an object), which defines a display cell of a corresponding instantiation of the user interface. Cook discloses that, in response to the user interacting with a visible object, the client computer determines if any behaviors are associated with that object, and if so, uses these behaviors to ascertain which objects change state as a result of the user interaction (for example, see column 10, line 35 – column 11, line 40). The client computer thus determines a current display state for the user interface, the new display state defined by the state of each of the

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objects. Cook discloses that, instead of searching each of the objects to determine if it changes state in response to the user interacting with a second object, the second object may define all of the behaviors which are associated with the state change of, i.e. user interaction with, the second object (see column 11, lines 21-40). In other words, Cook discloses that the second object may comprise a list of objects which change state in response to user interaction with the second object. Such a list of objects is considered a “state transition rule” like claimed, as it specifies a new display state of the user interface in the event of a user interacting with the second object. Accordingly, Cook further teaches determining, locally by the client device, a current display state of the user interface in accordance with a second display cell definition of a second of the display state definitions of the user interface for a second rendered display cell, i.e. object, of an immediately preceding instantiation of the user interface corresponding to an immediately preceding display state of the user interface, with which corresponding display cell a user interacted, the second display cell definition including a state transition rule specifying the current display state as the display state of the user interface in the event a user interacts with the corresponding second rendered display cell.

As per claims 3, 48, and 52, an object displayed within an instantiation of a user interface is considered a “display cell” of the instantiation, as is asserted above. As further described above, Cook discloses that a plurality of such objects may be organized within a display state definition (i.e. a “structure”). Accordingly, each display state definition (i.e. structure) comprises a display cell definition, like claimed, which defines a display cell of a corresponding instantiation of the user interface. Cook thus teaches generating by the client device a first display cell (i.e. object) of the current instantiation of the user interface in accordance with a first

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display cell definition of one of the one or more display state definitions (i.e. structures) associated with the current display state.

Concerning claims 4, 49, and 53, a current instantiation of the user interface of Cook may comprise multiple objects (see e.g. FIG. 3A), which as described above, are each considered a display cell. Cook, that is, teaches generating by the client device a second display cell of the current instantiation of the user interface in accordance with a second of the one or more display cell definitions of the same or another of the one or more display state definitions (i.e. structures) associated with the current display state.

As per claims 6, 20, and 35, Cook demonstrates that a current instantiation of the user interface may be multidimensional, or in other words, defined by a plurality of display state definitions, i.e. structures (see e.g. the instantiation of FIG. 3A and its corresponding hierarchical structured object list in FIG. 3B: the instantiation of FIG. 3A is defined by more than one display state definition, i.e. by a "BACKGROUND GROUP" structure, a "ROBIN GROUP" structure, a "TOM GROUP" structure, a "JILL GROUP" structure, an "ANNOTATION STACK" structure, and a "GREETING SWITCH" structure, as is shown in FIG. 3B).

Concerning claim 21, Cook teaches that the user interface provision function is part of a browser, as is described above in the rejection for claims 1 and 15.

Regarding claim 36, it is understood that the above-described method of Cook may be implemented on any type of client computer having a browser for receiving web pages and running java applets (for example, see column 6, lines 24-45). Consequently, it is understood that such a client computer may be a wireless telephone, a palm sized computer device, or a

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notebook sized computing device, which are all well-known computers capable of having such a browser.

As per claims 10, 25, and 40, Cook teaches, as described above in the rejection for claim 1, provisioning locally by a client device a first instantiation of a user interface of an application for a current display state of the user interface in accordance with at least a first one of a plurality of display state definitions (i.e. "structures") defining a plurality of instantiations of the user interface, including the first instantiation, for a plurality of display states of the user interface, including the first display state, with at least one of the plurality of instantiations of the user interface corresponding to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of display state definitions. Cook further teaches, like described above in the rejection for claim 45, that at least a first one of the plurality of display state definitions includes a plurality of display cell definitions correspondingly defining a plurality display cells (i.e. objects) of the first instantiation of the user interface, with at least one of the plurality of display cell definitions having a transition rule defining a next display state to transition to, when the content of the display cell is interacted with by a user. Moreover, for the reasons described above in claim 1, Cook teaches determining locally by the client device the display state of the user interface to be the next display state based on a user's interaction with the content of the display cell (i.e. object) of the first instantiation of the user interface, and in accordance with the corresponding display cell definition of the display cell; and provisioning by the client device the next instantiation of the user interface corresponding to the determined next display state of the user interface, in accordance with at least a second one of the plurality of display state definitions defining at least partially the next instantiation of the user interface.

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Cook thus teaches a method like that of claim 10. As per claims 25 and 40, Cook discloses that this method may be implemented by a browser on the client computer (see e.g. column 6, lines 24-45), which as known in the art, is implemented via programming instructions. A client computer storing and executing the browser of Cook is thus considered an article of manufacture like described in claim 25, and a client device like described in claim 40.

With respect to claims 11, 26, and 41, Cook teaches, as described above in the rejections for claims 1 and 45, transmitting by a server to a remote client device, a plurality of structures (i.e. display state definitions) defining a plurality of instantiations of a user interface of an application for a plurality of display states of the user interface, with at least one of the plurality of instantiations of the user interface corresponding to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of structures (for example, see column 10, lines 5-27). Moreover, Cook teaches that at least one of the plurality of structures includes a plurality of display cell (i.e. object) definitions, as is described above in the rejection for claim 45. Cook discloses that such display cell definitions specify the constituting contents for a corresponding display cell (i.e. object) of at least one of the plurality of instantiations of the user interface, whereby the server transmits to the remote client device, the constituting contents for the display cell for rendering an instantiation of the plurality of instantiations of the user interface on the remote client device in accordance with the display cell definition (see e.g. column 10, lines 5-27). Accordingly, Cook teaches a method like that of claim 11. As per claims 26 and 41, Cook discloses that such objects and their constituting contents are stored on, and transmitted from, a server (see e.g. column 6, lines 15-45). Such a server used to implement

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the method of Cook is considered an “application server” like that described in claim 26, and a server like that described in claim 41.

As per claims 46, 50, and 54, Cook discloses that a display cell definition comprises a display state transition rule specifying a display state of the user interface to be transitioned to in the event of user interaction with the display cell, as is described above in the rejection for claim 45.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 12, 19, 27, 34, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over the U.S. Patent of Cook, which is described above, and also over U.S. Patent No. 6,222,537, which is attributed to Smith et al. (and hereafter referred to as “Smith”). As shown above, Cook presents a method like that of claims 1 and 11, an article of manufacture like that of claim 15, a server like that of claims 26 and 41, and a client device like that of claim 30, whereby a client device provides an instantiation of a user interface in accordance with one or more display state definitions (i.e. structures) received from a server. Similarly, and for the reasons described above, Cook is considered to teach a method, product, and client device for generating a first and second portion of a user interface, each portion being in accordance with

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an object definition for an object of the interface, and whereby the object definition specifies constituting contents for the display object. Cook, however, does not explicitly disclose that a portion of the user interface is generated with constituting contents inherited from a pseudo instantiation of the user interface, as is expressed in each of claims 5, 12, 19, 27, 34, and 42.

Like Cook, Smith presents user interface objects, referred to as “controls,” which may be provided within web pages, and which may exist in one of a plurality of states (for example, see column 1, lines 50-62; and column 2, lines 32-45). Additionally like the objects of Cook, which are implemented via the Java programming language (for example, see column 6, lines 24-45 of Cook), the controls described by Smith are implemented via Java code (for example, see column 8, lines 33-39 of Smith). Regarding the claimed invention, Smith discloses that each control may inherit properties from a pseudo control, namely a “Control” component (for example, see column 8, line 50 – column 9, line 20). Smith thus teaches inheriting properties based on a pseudo instantiation of the user interface. The benefits of inheritance are well known in the programming realm.

Consequently, it would have been obvious to one of ordinary skill in the art, having the teachings of Cook and Smith before him at the time the invention was made, to modify the objects of Cook such that they inherit constituting contents from a pseudo object, as taught by Smith. It would have been advantageous to one of ordinary skill to utilize this combination, because such pseudo objects reduce the amount of code required to be written for each object, as is demonstrated by Smith.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (571) 272-4044. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

btb

1/8/2006

Tadesse Hailu
TADESSE HAILU
Patent Examiner